



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,593	02/12/2001	Marc VanHeyningen	05313.00001	9483

7590

10/21/2005

Banner & Witcoff, Ltd.
1001 G Street, N.W.
Washington, DC 20001-4597

EXAMINER

SON, LINH L D

ART UNIT

PAPER NUMBER

2135

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/782,593

Applicant(s)

VANHEYNINGEN, MARC

Examiner

Linh LD Son

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is written in responding to the Amendment received on 07/22/05.
2. Claim 4 is canceled.
3. Claims 1-3, and 5-48 are pending.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 5-10, and 12-43, and 45-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al, US Patent No 6125186, hereinafter "Saito" in view of Applicant admitted Prior Art, hereinafter "AAPA".

1. As per claims 1 and 43:

Saito teaches "A method of transmitting data securely over a computer network, comprising the steps of: (1) establishing a communication path between a first computer and a second computer" in (Col 5 lines 25-38); "(2) encrypting and transmitting data

Art Unit: 2135

records between the first computer and the second computer using a reliable communication protocol, wherein each data record is encrypted by incorporating a nonce and without reference to a previously transmitted data record” in (Col 5 lines 13-20); and “(3) in the second computer, receiving and decrypting the data records transmitted in step (2) by using the nonce in combination with a previously shared encryption key to decrypt each of the data records without reference to a previously received data record” in (Col 4 lines 50-54, and Col 5 lines 13-20, Figure 12B, 14A, and 14B). (The serial number is nonce incorporated in the data packet in Figure 12B and it does not reference to a previous data record (see figure 14A, and 14B)).

However, Saito does not specifically using the unreliable communication protocol to transmit the data. Nevertheless, Saito does mention of encrypting the data and stores in a UDP packet and then transfer (Col 5 lines 65-67, and Col 11 lines 45-60).

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to realize that the unreliable communication protocol is also considered in Saito's invention to transmit encrypted data.

Further, Saito is silent on the previously shared encryption key.

Nevertheless, AAPA discloses a method of implementing the SSL/TLS to provide a secure encrypted communication channel between the client and server (Specification, page 2 lines 9-29). The SSL/TLS method utilizes a shared key to encrypt/decrypt the data transferring back and forth.

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to modify Saito's invention to incorporate AAPA's

teaching to provide a double layers of security to transport the information in a network. The decryption process in the incorporation of Saito's and AAPA's teaching will require a previous shared key and the nonce to successfully decrypt the data record.

2. As per claims 2, 17, 24, and 31:

Saito teaches "Saito teaches "The method of claims 1, 16, 23, and 30, further comprising the step of, prior to step (1), establishing a reliable communication path between the first computer and the second computer and exchanging security credentials over the reliable communication path" in (Col 4 lines 37-54).

3. As per claims 3, 25, and 32:

Saito teaches "The method of claim 2, wherein the step of exchanging security credentials comprises the step of exchanging an encryption key that is used to encrypt the data records in step (2)" in (Col 4 lines 50-54).

4. As per claims 5, 12, 26, 33, 39, and 45:

Saito teaches "The method of claims 1, 10, 23, 30, 38, and 43, [4], wherein the nonce comprises a random number" in (Col 5 lines 9-12).

5. As per claims 6 and 34:

Saito teaches "The method of claims 1 and 30 [4], further comprising the step of, in the second computer, verifying that the nonce has not previously been- received in a previously transmitted data record" in (Col 12 lines 35-44).

6. As per claims 7, 22, 27, and 35:

Saito teaches "The method of claims 1, 16, 23, and 30, wherein step (2) comprises the step of embedding an indicator in each of the encrypted data records indicating that the encrypted data records are encrypted according to an encryption scheme that encrypts records without regard to any previously transmitted data records, and wherein step (3) comprises the step of determining whether the indicator is present in each received record and, in response to determining that the indicator is not present, processing each such record differently than if the indicator is set" in (Col 10 lines 30-41, Col 11 lines 30-40, and Col 12 lines 35-44).

7. As per claims 8, 13-15, 18, 40, 42, 46, and 48:

The system of claims 17, 10, 14, 17, 38, 41, 43, and 47, wherein the unreliable communication protocol comprises the User Datagram Protocol" in (Col 5 lines 45-60), and "wherein the reliable communication protocol comprises the Transmission Control Protocol" in (Col 5 lines 42-45).

8. As per claims 9, 21, 29, and 37:

Saito teaches "The system of claims 1, 16, 23, and 30, wherein the second computer comprises a proxy server" in (Col 17 lines 10-25). However, Saito is silent on the second computer forwards decrypted records received from the first computer to another server computer (See Figure 1). Nevertheless, Saito does teach of another embodiment of having the information processing unit receives the decrypted data. Therefore, it is obvious at the time of the invention was made for one having ordinary skill in the art to realize that the feature above is fully considered to be able to operate in multi-processor environment (Col 17 lines 20-25).

9. As per claims 10, 16, 23, 30, and 38:

Saito teaches "A method of securely transmitting a plurality of data records to a remote computer using an unreliable communication protocol, comprising: (1) establishing a reliable connection with the remote computer" in (Col 5 lines 25-38); "(2) exchanging encryption credentials with the remote computer over the reliable connection" in (Col 4 lines 37-54); "(3) generating a nonce for each of a plurality of data records, wherein each nonce comprises an initialization vector" in (Col 5 lines 10-120); "(4) using the nonce to encrypt each of the plurality of data records and appending the nonce to each of the plurality of data records" in (Col 5 lines 13-20); "(5) transmitting the plurality of data records encrypted in step (4) to the remote computer using an unreliable communication protocol, such that the remote computer can decrypt each of the plurality of encrypted data records using a corresponding nonce extracted from each

Art Unit: 2135

encrypted data record and a previously shared encryption key" in (Col 4 lines 50-54, and Col 5 lines 13-20, Figure 12B, 14A, and 14B). (The serial number is nonce incorporated in the data packet in Figure 12B and it does not reference to a previous data record (see figure 14A, and 14B)).

However, Saito does not specifically using the unreliable communication protocol to transmit the data. Nevertheless, Saito does mention of encrypting the data and stores in a UDP packet and then transfer (Col 5 lines 65-67, and Col 11 lines 45-60).

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to realize that the unreliable communication protocol is also considered in Saito's invention to transmit encrypted data.

Further, Saito is silent on the previously shared encryption key.

Nevertheless, AAPA discloses a method of implementing the SSL/TLS to provide a secure encrypted communication channel between the client and server (Specification, page 2 lines 9-2. The SSL/TLS method utilizes a shared key to encrypt/decrypt the data transferring back and forth.

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to modify Saito's invention to incorporate AAPA's teaching to provide a double layers of security to transport the information in a network. The decryption process in the incorporation of Saito's and AAPA's teaching will require a previous shared key and the nonce to successfully decrypt the data record.

Art Unit: 2135

10. As per claims 14, 41, and 47:

Saito teaches "The method of claims 10, 38 and 43, wherein step (6) is performed using an-encryption key previously shared using a reliable communication protocol" in (Col 4 lines 50-54).

11. As per claim 19:

Saito teaches "The system of claim 16, wherein the communication protocol client function and the communication protocol server function are compatible with the SOCKS communication protocol" in (Col 17 lines 10-25 and Col 18 lines 20-30).

12. As per claim 20,

Saito teaches "The system of claim 16, wherein the communication protocol client function and the communication protocol server function are compatible with the SSL/TLS communication protocol" in (Col 17 lines 27-34, and Col 17 line 65 to Col 18 line 57).

13. As per claims 28 and 36:

Saito teaches "The method of claims 23 and 30, wherein establishing the communication path with the remote computer is performed using the Transmission Control Protocol" in (Col 5 lines 40-49), and "encrypting the data records is performed using the User Datagram Protocol" in (Col 11 lines 45-67).

14. Claims 11 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito in view AAPA , and further in view of Lee et al, US Publication No. 2002/0101848A1, hereinafter "Lee".

15. As per claims 11 and 44:

Saito and AAPA teach "The method of claims 10 and 43, wherein step (6) comprises the step of checking to determine whether each data record received from the client computer is formatted according to a secure unreliable transmission format" in (Col 17 lines 10-25, and Col 11 lines 45-61). However, Saito and AAPA do not teach the determination if a particular record is not formatted according to a secure unreliable transmission format, bypassing the decryption using the corresponding nonce. Saito and AAPA do encrypt/decrypt all data regardless of transmission path or port using the corresponding nonce. Nevertheless, Lee discloses a "Systems and Methods for On-location, wireless access of web content" invention, which includes an encoder/decoder at the gateway or proxy server (Figure 7B), which process the packet according to the preset rules (Para 0067-71). Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to modify the invention to include the rule-based encoder/decoder to process the incoming data accordingly and also can reduce the unnecessary computation process.

Response to Arguments


16. Applicant's arguments, see Amendment, filed 07/22/2005, with respect to the rejection(s) of claim(s) 1-3, and 5-48 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Saito and AAPA.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh LD Son whose telephone number is 571-272-3856. The examiner can normally be reached on 9-6 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Linh LD Son


KIM VU
SUPERVISOR
EBC EXAMINER
EBC CENTER 2100